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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/687,867	10/13/2000	Yojiro Tagawa	1232-4653	1291

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Morgan & Finnegan LLP
345 Park Avenue
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EXAMINER

LONG, HEATHER R

ART UNIT PAPER NUMBER

2615

DATE MAILED: 10/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/687,867	Applicant(s) TAGAWA, YOJIRO	
	Examiner Heather R Long	Art Unit 2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-18 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 13 October 2000 and 10 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

Drawings

2. The drawings were received on June 10, 2004. These drawings are acceptable.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: "IMAGE SENSING APPARATUS EXECUTING EXPOSURE CONTROL USING OBJECT LUMINANCE INFORMATION".

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mukai (U.S. Patent 5,557,358) in view of Arai (U.S. Patent 5,049,997).

Regarding claim 1, Mukai et al. discloses in Figs. 22-24 an apparatus comprising: an image sensing sensor (40) adapted to convert an optical image into an image signal; a viewfinder (32) adapted to display the image signal

obtained by the image sensing sensor; and a correction device adapted to correct brightness of the viewfinder in accordance to the exposure value (col. 3, lines 21-49; col. 11, lines 37-44). However, Mukai et al. fails to disclose that the correction device corrects the brightness of the viewfinder in accordance with a difference between a luminance level of the image signal obtained by the image sensing sensor, and a target luminance level which indicates an exposure value of a photographing operation.

Referring to the Arai reference, Arai discloses in Fig. 3 an apparatus comprising a correction device that determines a difference between a luminance level of the image signal obtained by the image sensing sensor, and a target luminance level which indicates an exposure value of a photographing operation (col. 2, lines 40-56; col. 3, lines 10-15; col. 5, lines 34-44). It is implicit that the threshold value T indicates an exposure value of a photographing operation.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the teachings of correcting brightness of the viewfinder as disclosed by Arai with Mukai et al. in order to provide an exposure control method and apparatus capable of a precise exposure control even if a main object is displaced more or less from the center of an image frame or even if the size of the main object is indefinite over consecutive scenes.

Regarding claim 2, Arai discloses in Fig. 3 an apparatus wherein the correction device obtains the luminance level of the image signal obtained by the

image sensing sensor by a first method, and obtains the target luminance level by a second method different from the first method (col. 5, lines 34-44).

Regarding claim **3**, Arai discloses an apparatus wherein the first method is a method of obtaining an average luminance of the image signal obtained by the image sensing sensor (col. 5, lines 22-33).

Regarding claim **4**, Arai discloses an apparatus wherein the first method is a method of obtaining a central luminance of the image signal obtained by the image sensing sensor (col. 5, lines 22-33).

Regarding claim **5**, Arai discloses an apparatus wherein the second method is a method of obtaining the target luminance level in accordance with an exposure correction value (col. 4, lines 48-56).

Regarding claim **6**, Arai discloses an apparatus wherein the second method is a method of obtaining the target luminance level in accordance with evaluative photometry results obtained by divisionally evaluating the luminance level of the image signal obtained by the image sensing sensor in correspondence with a plurality of positions on an image sensing surface of the image sensing sensor (col. 5, lines 23-44).

Regarding claim **7**, Arai discloses in Fig. 3 an apparatus comprising: an exposure control device adapted to sense an image under the exposure control corresponding to the target luminance level (col. 4, lines 48-51).

Regarding claim **8**, Arai discloses an apparatus wherein the exposure control device makes the exposure control in correspondence with the luminance

level of the image signal obtained by the image sensing sensor (col. 4, lines 48-56).

Regarding claim **9**, Mukai et al. discloses an apparatus wherein the correction device corrects the brightness of the viewfinder (col. 11, lines 37-44). However, Mukai et al. fails to disclose that viewfinder brightness is corrected according to the difference between the luminance level of the image signal obtained by the image sensing sensor, and the target luminance level.

Referring to the Arai reference, Arai discloses in Fig. 3 an apparatus wherein the correction device obtains the difference between the luminance level of the image signal obtained by the image sensing sensor, and the target luminance level (col. 2, lines 22-48).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the teachings of correcting brightness of the viewfinder as disclosed by Arai with Mukai et al. in view of Arai in order to provide an exposure control method and apparatus capable of a precise exposure control even if a main object is displaced more or less from the center of an image frame or even if the size of the main object is indefinite over consecutive scenes.

Regarding claim **10**, Mukai et al. in view of Arai discloses all subject matter as discussed with respect to claim 1, except that the correction device corrects the brightness of the viewfinder when the difference between the

luminance level of the image signal obtained by the image sensing sensor, and the target luminance level is larger than a predetermined value.

Arai discloses in Fig. 7 a second embodiment comprising an apparatus wherein the correction device corrects the brightness of the viewfinder when the difference between the luminance level of the image signal obtained by the image sensing sensor, and the target luminance level is larger than a predetermined value.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a target luminance level larger than the predetermined value as opposed to the target luminance level smaller than the predetermined value as disclosed by Mukai et al. in view of Arai in order to discriminate a scene for performing exposure adjustment.

Regarding claim **11**, Arai discloses in Fig. 7 an apparatus wherein the correction device comprises an exposure control device adapted to make exposure control in correspondence with the luminance level of the image signal obtained by the image sensing sensor when the difference between the luminance level of the image signal obtained by the image sensing sensor, and the target luminance level is larger than the predetermined value. This is claimed in Arai's second embodiment however it would have been obvious to one of ordinary skill in the art to have changed the comparison of smaller than in his first embodiment to greater than.

Regarding claim **12**, Arai discloses in Fig. 3 an apparatus wherein the correction device does not correct the brightness of the viewfinder when the difference between the luminance level of the image signal obtained by the image sensing sensor, and the target luminance level is smaller than a predetermined value (col. 5, lines 34-44).

Regarding claim **13**, Arai discloses in Fig. 3 an apparatus wherein the correction device comprises an exposure control device adapted to make exposure control in correspondence with the target luminance level when the difference between the luminance level of the image signal obtained by the image sensing sensor, and the target luminance level is smaller than the predetermined value (col. 5, lines 34-44).

Regarding claim **14**, Mukai discloses an apparatus wherein the apparatus includes an image sensing apparatus (40) (col. 3, lines 21-34).

Regarding claim **15**, Mukai et al. discloses an apparatus wherein the apparatus includes a camera (col. 3, lines 21-34).

Regarding claim **16**, Mukai et al. discloses a control method for controlling an image sensing apparatus, comprising the step of: displaying the image signal obtained by an image sensing sensor on a viewfinder, and correcting the brightness of the viewfinder (col. 3, lines 21-49; col. 11, lines 37-44). However, Mukai et al. fails to disclose that the correction device corrects the brightness of the viewfinder in accordance with a difference between a luminance level of the

image signal obtained by the image sensing sensor, and a target luminance level of a photographing operation.

Referring to the Arai reference, Aria discloses in Fig. 3 an apparatus comprising a correction device that determines the difference between the luminance level of the image signal obtained by the image sensing sensor, and a target luminance level of a photographing operation (col. 2, lines 40-56; col. 3, lines 10-15; col. 5, lines 34-44).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the teaching of using the difference between the luminance level and a target luminance level in order to correct brightness of the viewfinder as disclosed by Arai with Mukai et al. in order to provide an exposure control method and apparatus capable of a precise exposure control even if a main object is displaced more or less from the center of an image frame or even if the size of the main object is indefinite over consecutive scenes.

Regarding claim **17**, Mukai et al. discloses a computer program product that supplies a control program of an image sensing apparatus including a content of: displaying the image signal obtained by an image sensing sensor on a viewfinder (col. 3, lines 21-49; col. 11, lines 37-44). However, Mukai et al. fails to disclose that the correction device corrects the brightness of the viewfinder in accordance with a difference between a luminance level of the image signal

obtained by the image sensing sensor, and a target luminance level which indicates an exposure value of a photographing operation.

Referring to the Arai reference, Aria discloses a computer program product that determines the difference between the luminance level of the image signal obtained by the image sensing sensor, and a target luminance level (col. 2, lines 40-56; col. 3, lines 10-15; col. 5, lines 34-44).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the teaching of using the difference between the luminance level and a target luminance level in order to correct brightness of the viewfinder as disclosed by Arai with Mukai et al. in order to provide an exposure control method and apparatus capable of a precise exposure control even if a main object is displaced more or less from the center of an image frame or even if the size of the main object is indefinite over consecutive scenes.

Regarding claim 18, Mukai et al. discloses a computer program product wherein the computer program product includes a storage medium (col. 20, line 26).

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP.

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Heather R Long whose telephone number is 703-305-0681. The examiner can normally be reached on Mon. - Thurs.: 7:00 am - 4:30 pm, and every other Fri.: 7:00 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Christensen can be reached on (703) 308-9644. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2615

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HRL
October 7, 2004



TUAN HO
PRIMARY EXAMINER